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FACTORS THAT INFLUENCE CAREER MOTIVATION
IN THE FIGHTER COMMUNITY

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<p>→ For a number of years, aviation personnel retention studies have emphasized those who separate rather than those who choose a naval career. The necessity of research addressing the aviation personnel retention problem is further dictated by the escalating costs associated with replacing trained naval aviators and their increased importance in modern warfare. The present study examined factors contributing to aviators' decisions to remain or separate from naval aviation. This study indicates that the primary reasons for remaining in naval aviation were centered around enjoyment of flying, coupled with the self-esteem associated with being a naval aviator. The desire to fly was found to be a strong career motivator, and when the opportunity to fly declines or flight goals are fulfilled, aviators are more likely to leave the Navy. Major causes of career dissatisfaction were extended deployment, inadequate time allocated to flying duties, insufficient port calls during cruises, and long workdays during shore tours. The finding that pilots were more likely than radar intercept officers to separate agrees with current naval aviation personnel retention statistics. <i>Keynote</i></p>				
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SUMMARY PAGE

THE PROBLEM

For a number of years, aviation personnel retention studies have emphasized those who separate rather than those who choose a naval career. The present study examined factors that contribute to aviators' decisions to remain or separate from naval aviation. The current study also attempted to incorporate the recommendations of a previous report by identifying leading factors contributing to career retention and separation.

FINDINGS

Primary reasons for remaining in naval aviation centered around the enjoyment of flying, coupled with the self-esteem associated with being a naval aviator. The desire to fly is a strong career motivator, and when the opportunity to decline or flight goals are fulfilled, aviators are more likely to leave the Navy. Other major reasons for leaving are extended deployment, inadequate time allocated to flying duties, insufficient port calls during cruises, and long workdays during shore tours. The finding that pilots were more likely than radar intercept officers to separate agrees with current naval aviation personnel retention statistics.

RECOMMENDATIONS

1. Generalization of this report's findings is necessary before any final conclusions can be reached; therefore, we recommend that this research program be expanded to include other aviation communities.
2. The Career Motivation Inventory represents a tool that could be used in a longitudinal study to determine its usefulness as a predictor of career retention, and to evaluate relations between stated career intentions and actual career choice.

Acknowledgments

The authors greatly appreciate the time, effort, and cooperation of Fighter Wing ONE personnel in conducting this project. Special recognition is acknowledged for CAPT McCrory, CDR Tillman, and LT Parks of Fighter Wing ONE for their guidance, foresight, and coordination of this effort, and A. Thomas for his participation in the interviewing and methodology development phases of this project.

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INTRODUCTION

Anticipated expansion to a 600-ship Navy coupled with the growing number of squadrons and aircraft have resulted in an increased demand for aviators (1). A Department of Defense report projects a 5.8% increase in Navy pilots over the next 5 years; from 15,076 in 1986 to 15,948 in 1991 (2). Currently, there is a critical shortage of pilots in both the fleet and training commands (3). The Navy's ability to meet this critical need is in serious question. Decline in pilot retention from 58% in 1983, to 56% and 53% in 1984 and 1985, respectively, (4) has prompted considerable concern (5,6,7,8). Figures for 1986 indicate a continuing decline in pilot retention to 46%, with a projected rate of 44% in 1987. Pilot retention statistics for 1984 (4) indicate a lower retention rate for jet (53%) and propeller (52%) communities than the helicopter (73%) community. Naval flight officer retention rates were 76% and 73% for jet and propeller communities, respectively in 1983 (4).

Some sources relate the recent reduction in aviator retention to a strong economy and a sharp increase in commercial airline hires (5) while others maintain the cause is due to the nature of extended sea duty (6). In a January 1986 message, Admiral James D. Watkins, then Chief of Naval Operations, emphasized:

"...Aviator retention has been cyclic in nature since World War II. When airlines hire, Navy and Air Force see reduced aviator retention. We simply can't compete with that draw for some individuals who view flying for the airlines as a 'better' lifestyle." (5)

According to the Future Aviation Professionals of America, approximately half of the commercial pilots hired in 1984 had previous military aviation experience (9). As a ready-made source of trained pilots, the military continues to suffer a manpower drain, especially during current airline industry deregulation. Major airlines hired 4,544 pilots in 1985, up dramatically from the 1,368 hired in 1984, with a total industry hire in excess of 8,260 for 1985 (9). With a projected replacement of 2,000 retiring pilots during each of the next 10 years, the Navy faces a challenging task of maintaining an effective pilot retention program. The "pull" factors of opportunities existing outside the military only partially account for the continuing exodus of Navy pilots. Vice Admiral Robert Dunn, Commander, Naval Air Force, Atlantic, maintains that the problem of retaining aviators is further compounded by current global instability. Due to the current world situation, cruises have been extended in length while the number of port calls have been reduced,

"...often they are just out steaming around somewhere without port visits for a while, spending 120 days at sea in the Indian Ocean or eastern Mediterranean, standing by to respond." (6)

As time at sea increases, a proportionate increase of family separation is also experienced. With the addition of such "push" factors as benefit erosion, crisis management, insufficient flight time, extended sea duty, and discontinuation of the aviation career bonus for third-tour pilots, the Navy's pilot retention strategies may be in jeopardy.

The Navy currently maintains a program to monitor the major factors contributing to separation from the military (10). Officers separating from

service complete the Officer Separation Questionnaire (OSQ), which is generally administered on an individual basis. The OSQ data are compiled each fiscal year. It is important to recognize that the OSQ is not aviation-specific and only includes broad categories. The most recent OSQ rankings are as follows (3):

FY85 RANKING		FY84 RANKING
1	Too much family separation	1
2	Too much crisis management	2
3	Unable to sufficiently plan and control career	4
4	Suppressed initiative, creativity, and professional stimulation	3
5	Insufficient managerial/leadership qualities of seniors	6
6	Lack of recognition for accomplishment/self respect	5
7	Poor utilization of abilities, skills, and education	8
8	Possible erosion of benefits	10
9	Problems with assignment and detailing	9
10	Geographic instability/transient nature of Navy	7

For a number of years, similar retention studies have been conducted by the Navy that emphasized those who separate rather than those who choose a naval career. The present study examined factors contributing to aviators' decisions to either remain or separate from naval aviation. This approach coincides with Admiral Watkins' statement:

"....What we can and must do is listen to those aviators who want to stay with us. If we pay attention, and I believe we are, those individuals who could swing one way or the other will remain on board." (5)

The current study used an inventory of items pertaining to career retention described in a previous report (11) to identify leading satisfiers and dissatisfiers and to establish relative normative data.

Specifically, the study sought to assess factors impacting (1) career choice, (2) career goals, (3) career satisfaction and dissatisfaction, (4) retention and separation, (5) peer support, (6) civilian employment opportunities, (7) occupational anxiety, (8) success in a naval aviation career, and (9) spousal and aviator personal characteristics contributing to success in naval aviation. Data were analyzed across rank, designation, commissioning source, aviation experience, demographic and environmental background, and socioeconomic status.

An additional area of interest by Fighter Wing ONE (8) was the relationship between career retention and socioeconomic status and hometown size. It was speculated that aviation personnel from lower socioeconomic backgrounds, or smaller communities, would be more likely to continue in naval aviation than those from metropolitan areas or advantaged socioeconomic levels.

METHOD

Subjects. The respondents were 138 pilots and 137 radar intercept officers (RIOs) from 14 Fighter Wing ONE squadrons based in Oceana, Virginia. The group consisted of 6% ensigns (O-1), 18% lieutenant junior grades (O-2), 42% lieutenants (O-3), 29% lieutenant commanders (O-4), and 5% commanders (O-5). Approximately 53% of the aviators indicated that they intended to continue their naval careers, while 38% were undecided, and only about 10% indicated they would separate from naval service. Additional demographic data for the respondents are in Appendix A.

Procedure. All respondents were administered the Career Motivation Inventory (CMI) (11). The CMI is a 213-item survey by which statements are evaluated as to their relative importance using a Likert-type interval scale (12). Scale values ranged from 1 (no effect) to 7 (extremely important/relevant/significant). Statements that were not applicable were rated as "0." Respondents were instructed to evaluate statements on the basis of personal judgment. Additional data were collected on (1) rank, (2) designation, (3) recruiting station, (4) commissioning source, (5) date received wings, (6) amount of time on cruise, (7) career intentions, (8) hometown, (9) college major, (10) marital status, (11) number of children, and (12) father's/spouse's occupation. Stated career intention was used as a dependent variable because it is a good indicator of actual career choice (13,14,15,16) and provides a means to assess aviators who are planning to separate. An additional section was provided for optional remarks.

Occupational classifications were assigned using Duncan's Socioeconomic Index for 1970 Census detailed occupation codes (17). Recruiting station classifications were determined by using the Navy Recruiting Areas and Districts codes. College major classifications were assigned using the United States Department of Commerce's Major Fields of Study Reference List Guide (18). Hometown was quantified by coding population size (19).

Respondents were briefed on the anonymity of the CMI. They were informed that the purpose of the CMI was to identify (1) career satisfactions and dissatisfactions, (2) career goals, (3) common socioeconomic factors among Fighter Wing ONE personnel, (4) factors contributing to retention and separation, and (5) factors contributing to naval aviation career choice. All participants were briefed that the CMI would be administered to all aviators in the Fighter Wing.

RESULTS

The general results describing reasons to remain in naval aviation, relationships between career intentions and select military and demographic characteristics, and career satisfaction and dissatisfaction are presented. Additionally, select characteristics of those O-3s and above who indicated an intention to continue are included.

The detailed results (highest ranking variables, the factor structure, and the between-groups analyses) are presented separately for each of the 10 component categories of the CMI (11) in Appendix B. Variable rankings and factor structures were not practical to present for some component categories. As a data reduction technique, factor analyses were performed for each category independently, in lieu of separate analyses for all 213 items within the CMI (11). In all cases, the responses from all respondents combined were used, and the factors rotated using

the varimax rotation technique. Categories for which a minimum of 50% of the cumulative variance could be accounted for using a maximum of seven factors provided the factors used in the between-groups analyses. Differences between rank, designation, career intention, and background variables were assessed across all factors. Additional analyses are provided indicating the major differences between aviators continuing or separating from naval service.

Reasons to Remain in Naval Aviation. As shown in Table 1, 'flying' and 'sense of doing something worthwhile' were the two most important reasons for remaining in naval aviation. Ranked as the third most important reason by the continuing aviation officers (CAOs) was 'anticipation of achieving command' as compared to 'excellent quality of colleagues' by the separating aviation officers (SAOs). As expected, SAOs evaluated all the reasons to remain in naval aviation consistently lower than the CAOs.

TABLE 1

Means of Ten Leading Reasons to Remain in Naval Aviation by Career Intention (N = 275)

	Overall		Continuing*		Separating**	
	<u>M</u>	Ranking	<u>M</u>	Ranking	<u>M</u>	Ranking
Flying	6.36	1	6.38	1	6.00	1
Sense of doing something worthwhile	5.48	2	5.65	2	5.12	2
Self-esteem due to career	5.30	3	5.39	4	4.89	4
Anticipation of new, more sophisticated aircraft	5.22	4	5.07	14	4.85	5
Comradery	5.16	5	5.29	6	4.74	7
Opportunity to excel	5.15	6	5.30	5	4.73	8
Challenges of the career	5.12	7	5.28	7	4.65	10
Leadership opportunity	5.11	8	5.26	9	4.58	13
Competitiveness	5.10	9	5.27	8	4.69	9
Rank promotions	5.07	10	5.25	10	4.54	14

* Ranked 3rd for this group was 'anticipation of achieving command' (M = 4.96).

** Ranked 3rd and 6th for this group were 'excellent quality of colleagues' (M = 4.96) and 'peer recognition' (M = 4.81).

Relationships Between Career Intentions and Select Military and Demographic Characteristics.

Rank. Generally, the decision whether or not to remain in naval aviation was not formulated until the O-3 rank. As shown in Appendix A, neither O-1s nor O-2s expressed an intention to separate. At the O-3 level, the percentage of aviators intending to separate begins. In addition, the percentage of undecided responses substantially decreased with rank. About 53% of the O-3s were undecided, compared to only 15% of the O-4s and 7% of the O-5s. The decline in undecided responses reflects a proportional increase of an intention to continue: 36% for O-3s, 71%

for O-4s, and 78% for O-5s. An overall chi-square showed a significant relationship between rank and career intention ($\chi^2(8, N = 275) = 46.01, p < .01$).

Designation. We found that RIOs were significantly more likely to remain in naval aviation than pilots. As depicted in Appendix A, 63% of RIOs indicated an intention to continue compared to only 43% of pilots. Similarly, 15% of pilots indicated they would separate compared to only 4% of RIOs. In addition, more pilots were undecided in their career intentions (42%) than RIOs (34%). A chi-square analysis showed a significant relationship between designation and career intention ($\chi^2(2, N = 275) = 12.95, p < .01$).

Spouse Occupation. A cross-classification analysis indicated that an aviator's career intention was significantly dependent on the spouse's occupational status. As demonstrated in Table 2, the higher the spouse's occupational status, the less likely an aviator was to continue, and the more likely he was to respond with undecided when completing the career intention question.

TABLE 2
Relationship Between Career Intention and Spouse's
Occupational Status ($n = 198$)

Career Intention	Spouse's Occupational Status			
	Low	Medium	High	Total
Will continue	53 (65%)	34 (60%)	26 (43%)	113 (57%)
Will separate	12 (15%)	3 (5%)	6 (10%)	21 (11%)
Undecided	16 (20%)	20 (35%)	28 (47%)	64 (32%)
Total	81 (41%)	57 (29%)	60 (30%)	198 (100%)

$$\chi^2(4, n = 198) = 6.05, p < .01$$

Demographic. An analysis of variance for career intention across number of children was significant ($F_{2, 123} = 10.38, n = 126, p < .0001$). The mean number of children for CAOs, SAOs, and undecided career intention groups was 1.92, 1.63, and 1.28, respectively. A Tukey post-hoc analysis indicated that aviators who were undecided about their career intentions had significantly fewer children than aviators who were continuing or separating from naval aviation ($MSE = .44, df = 123, p < .05$). No differences were found between CAOs and SAOs with respect to number of children. In summary, no differences existed between CAOs and SAOs with regard to commissioning source, marital status, or number of children.

Financial. All six variables that were directly concerned with monetary compensation were analyzed to determine if differences existed between CAOs and SAOs. Significant differences were found for the aviation bonus as a reason to remain in naval aviation ($F_{2, 272} = 3.20, p < .04$), and 'military pay increases not keeping pace with the cost of living' as a reason to leave naval aviation ($F_{2, 272} = 4.09, p < .02$). Separating officers were found to evaluate both variables significantly lower. No significant differences between SAOs and CAOs were found for financial growth ($F_{2, 272} = 1.57$) or job security ($F_{2, 272} = 2.52$) as factors for choosing a naval aviation career, financial compensation as a reason to remain in naval aviation ($F_{2, 272} = .37$), or money as a contributor to career satisfaction ($F_{2, 272} = .43$).

Career Satisfaction. While the CAOs rated 'enjoyment of flying F-14' first, and 'obtaining wings' second as career satisfiers, the reverse was true for the SAOs (Table 3). The CAOs placed more emphasis on 'high quality/caliber of colleagues' while the SAOs were more satisfied with 'knowing you can do something that few others can do' and 'peer recognition' items. The rest of the rankings were generally the same.

TABLE 3

**Mean Scores of Ten Leading Career Satisfiers
by Career Intention ($N = 275$)**

	Overall		Continuing*		Separating	
	<u>M</u>	Ranking	<u>M</u>	Ranking	<u>M</u>	Ranking
Enjoyment of flying F-14	6.37	1	6.31	1	6.21	2
Obtaining wings	6.28	2	6.17	2	6.58	1
Professionally competent	6.06	3	6.12	3	5.96	3
Sense of doing something important	5.98	4	6.08	4	5.63	5
ACM	5.80	5	5.69	7	5.62	6
High quality/caliber of colleagues	5.71	6	5.76	5	5.44	9
Camaraderie	5.69	7	5.74	6	5.54	8
Knowing you can do something that few others can do	5.64	8	5.57	8	5.65	4
Peer recognition	5.44	9	5.40	11	5.61	7
Firing weapon systems	5.37	10	5.52	9	5.31	10

* Ranked 10th for this group was 'ability to impact important decisions' ($M = 5.48$).

Selected Characteristics of 0-3s and Above Who Intend to Continue. Forty percent ($n = 111$) of the subjects were 0-3s and above who intended to continue, and details of their backgrounds may be useful for developing background items for recruiting purposes. The group, 46% pilots and 54% RIOs, tended to be recruited from the mid-eastern (29.1%) and southeastern states (24.1%). Major commissioning sources were AOCS (47.7%), USNA (29.3%), and NROTC (17.1%). Median length of time

since receiving wings was 10 years, with a median of 2 years on cruise. Median hometown size for this group was 26,897. Typical occupations of fathers were military service-active and retired (29.5%), professional and technical worker (23.3%), manager and proprietor (14.6%), and craftsman and foreman (11.7%). The majority of aviators were married (83.8%) with an average of two children. Primary occupations of spouses were homemaker (49.5%), and professional and technical worker (31.6%). Major fields of study for these aviators included engineering (27.5%), business and management (22.0%), and social sciences (10.1%).

Career Dissatisfaction. As demonstrated in Table 4, 'family separation,' 'inadequate time allocated to flying duties,' and 'extended deployments' were leading career dissatisfiers common to all ranks. The rankings and means include all respondents within each respective rank, regardless of career intention. The data are provided at the request of Fighter Wing ONE to compare differences among rank groups with respect to career dissatisfiers.

TABLE 4

Leading Career Dissatisfiers and Mean Scores by Rank (N = 275)

Rank	Item	M	SD
0-1	*Family separation	5.71	1.27
	*Inadequate time allocated to flying duties	5.13	1.41
	*Extended deployments	4.93	1.39
	Removed from flying billet to desk job	4.87	1.85
	Military pay increases not keeping pace with cost of living	4.13	1.51
	Long workdays during shore tours	4.13	1.56
0-2	*Family separation	5.94	1.35
	Removed from flying billet to desk job	5.83	1.60
	*Extended deployments	5.77	1.26
	*Inadequate time allocated to flying duties	5.69	1.43
	Military pay increases not keeping pace with cost of living	5.33	1.59
	Insufficient port calls during cruises	5.09	1.51
0-3	*Extended deployments	6.24	1.14
	*Family separation	6.08	1.50
	*Inadequate time allocated to flying duties	5.97	1.21
	Long workdays during shore tours	5.79	1.28
	Outlook of continued extended personal sacrifice	5.73	1.47
	Insufficient port calls during cruises	5.57	1.60
0-4	*Family separation	6.17	1.16
	*Extended deployments	5.93	1.28
	*Inadequate time allocated to flying duties	5.82	1.35
	Extensive work-ups for cruises	5.38	1.43
	Outlook of continued extended personal sacrifice	5.31	1.76
	Military pay increases not keeping pace with cost of living	5.17	1.70
0-5	*Family separation	5.71	1.33
	*Extended deployments	5.21	1.12
	Insufficeint port calls during cruises	5.14	1.46
	*Inadequate time allocated to flying duties	5.00	1.62
	Outlook of continued extended personal sacrifice	4.93	1.69
	Extensive work-ups for cruises	4.86	1.46

*Indicates item is common to all rank groups

DISCUSSION

The main objective of this study was to determine the motivational factors contributing to career retention and career satisfaction. In contrast to studies involving naval aviator separation, the present study also sought to determine why aviators continue. This type of focus is important since, as suggested by others (13,20), the results may be qualitatively different from those obtained from post-hoc survey studies of aviation personnel leaving military careers.

Primary reasons for remaining beyond the initial commitment period were centered around the enjoyment of flying, coupled with the self-esteem associated with a naval aviation career. The desire to fly is a strong career motivator, and as supported elsewhere (21), when the opportunity to fly declines, aviators are more likely to leave the Navy. In fact, the decision to enter civilian careers appears often to be a 'post-entry' decision (13).

While the leading career goal was to remain in a flying billet, major career dissatisfiers were centered around family separation, extended deployment, and inadequate time allocated to flying duties. Insufficient port calls during cruises and long workdays during shore-tours were additional leading career dissatisfiers.

In comparing the rankings of career dissatisfiers with those obtained using the OSQ (10), it must be noted that the OSQ career dissatisfiers were based on separating naval officers' opinions, while this study focused on naval aviators only. In addition, the OSQ uses general categories, whereas this study emphasized more specific factors that produced more detailed information. Although the two studies were generally in agreement on career dissatisfiers, this study indicated more items were deployment-related, while the OSQ categories contained relatively more items of an administrative nature and career growth inhibitors.

Whether an aviator was continuing or separating from naval aviation service was clearly related to an officer's designation and spouse's occupation. Pilots are more likely than RIOs to separate, and this supports current naval aviation personnel retention statistics (4). The most interesting finding, however, was the relationship between the spouse's occupation and the aviator's decision to continue. Nearly two-thirds of the aviators who were married to spouses with low occupational status scores elected to continue a naval aviation career, as compared to only 40% of the aviators whose spouses had high occupational status scores. There are two plausible explanations for this finding. The first explanation deals with financial stability. During the interviews conducted in the development of the CMI (11), we learned that aviators with spouses in professional and managerial occupations perceived that they could rely on their spouse's income during their transition to civilian positions, which generally resulted in a lower income initially than earned in the Navy. Spouses with low occupational status scores were typically homemakers with no outside incomes and thus would provide no financial support for an aviator transitioning from a naval aviation career to a civilian career. Second, spouses in the professional and managerial occupations would be comparatively more affected by the continual permanent change of station moves associated with a naval career. It is likely that the effect on the spouse's career has an impact in the decision to leave naval aviation. This effect could presumably be less important for aviators whose spouses are homemakers or are employed in clerical or similar occupational groups.

Commissioning source, marital status, number of months of aviation or cruise experience, hometown size, college major, father's occupational status score, and number of children appeared to have no significant relationship to an aviator's decision to continue or separate. Similar findings are reported elsewhere (13,20).

Further analysis of all variables that were directly concerned with monetary compensation did reveal differences between CAOs and SAOs. Separating aviation officers significantly evaluated the aviation bonus lower as a reason to remain in naval aviation and evaluated military pay increases not keeping pace with cost of living significantly lower as a reason to leave naval aviation. In short, the aviation bonus had no effect in retaining those separating.

Separating aviation officers were also found to be different from their counterparts in their evaluation of career goals. Separating aviation officers were significantly lower in evaluating LEADERSHIP, FLIGHT, and LONG-TERM CAREER PATH GOALS. This is not to say that an officer who is separating places less emphasis on these goals, but that it is reasonable to assume that goals in these areas may have already been accomplished and are no longer of major importance. This interpretation is partially supported by the findings that O-4s and O-5s were lower than junior officers in their evaluations of FLIGHT GOALS, and that O-4s placed less emphasis on LEADERSHIP GOALS than O-1s and O-2s. It is possible that as aviators increase their aviation and leadership experience with advances in rank several major career goals are fulfilled or blocked. This in turn diminishes the number of remaining goals and consequently influences the decision to separate. Additional support is provided by the finding that SAOs evaluated the PROFESSIONAL GROWTH factor as a reason to remain in naval aviation significantly lower than CAOs.

Finally, it is important to note that SAOs evaluated PERSONAL SACRIFICE significantly higher than CAOs as a reason to separate and as a leading career dissatisfier. No other significant differences were found between CAOs and SAOs with respect to any career satisfaction or dissatisfaction factors. These findings lend strong support against the notion that officers who separate from naval aviation service do so only because of family separation. An analysis across the item family separation, in fact, indicated no significant difference in evaluations between CAOs and SAOs.

In summary, aviation officers who separate from naval service and transition to civilian careers do so for a number of reasons. The primary reasons appear to be due to the fulfillment of established goals (i.e., 1000 flight hours) and the outlook of continued personal sacrifice (i.e., extended deployment). Financial concerns, although pertinent, appear to revolve around the ease of transitioning from military to civilian life and may be dependent on the spouse's career. A determination cannot be made from this study if the extension of the Aviation Career Incentive Bonus would increase the personnel retention rates in aviation. Evidence was found to indicate that SAOs did not consider direct Navy compensation as a strong reason to either separate or continue in a naval aviation career.

Several differences between pilots and RIOs were found and warrant discussion. In general, pilots were significantly different from RIOs in their orientation toward career goals. The most notable findings, with respect to career goals, were that RIOs were substantially more oriented toward long-term, leadership, diversified educational, professional growth, and training goals than pilots. This is further supported in that RIOs indicated subordinate leadership

contributed significantly more to their career satisfaction than for pilots. Additionally, RIOs evaluated managerial skills as significantly more important to career success than pilots and perceived the managerial/leadership aspects of their careers as more important. It is possible that this qualitative difference, in conjunction with fewer commercial aviation opportunities available, contributes to higher retention rates among RIOs in comparison to pilots.

An additional finding mentioned previously was the importance of spouse support. The data clearly indicated an increasing perception of the importance of support from the spouse with increases in rank. The data indicate that O-5s and O-4s were significantly higher in their evaluations of the supportive, flexible, and individualistic qualities of their spouses as contributing to career success than O-1s and O-2s. These data may be due to a self-selection process. Aviators without strong support of the spouse may have separated from naval service early in their careers, leaving aviators with strong spousal backing to continue to senior ranks. Under this premise, it would not be surprising to find senior officers evaluating spousal support significantly higher than those early in their careers. A reasonable extension of this study would include the evaluation of spousal support as a tool in predicting career continuation.

RECOMMENDATIONS

1. Generalization of this report's findings is necessary before any final conclusions can be reached; therefore, we recommend that this research program be expanded to include other aviation communities.

2. The Career Motivation Inventory represents a tool that could be used in a longitudinal study to determine its usefulness as a predictor of career retention and to evaluate relations between stated career intentions and actual career choice.

REFERENCES

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APPENDIX A

Detailed Demographic Characteristics of Respondents.

One hundred twenty six aviators were commissioned through Aviation Officer Candidate School, 4 through Officer Candidate School, 47 from the Naval Reserve Officer Training Corps, and 83 from the Naval Academy. The amount of time elapsed since receiving wings ranged from 4 to 238 months ($\bar{M} = 68.9$, $SD = 54.9$). Total time spent on cruise ranged from 0 to 72 months ($\bar{M} = 15.3$, $SD = 15.3$).

Sixty five aviators reported they were never married (23.6%), 198 were married (72.0%), 10 were divorced (3.6%), and 1 was separated (.4%). One hundred twenty six aviators had children (45.8%), with the number of children ranging from 1 to 4 ($\bar{M} = 1.73$, $SD = .71$). Summary statistics for this population by rank and designation are given in Table A-1.

TABLE A-1

Summary Statistics on Respondent Classification ($N = 275$)*

	0-1		0-2		0-3		0-4		0-5		Total	
	Pilot	RIO	Pilot	RIO	Pilot	RIO	Pilot	RIO	Pilot	RIO	Pilot	RIO
Number	0	15	17	32	70	46	45	36	6	8	138	137
Average number of months on cruise	0	1.0	3.0	5.5	9.7	14	26	32	46	47	18	22
Average number of months since receiving wings	0	7.4	11	20	46	49	119	131	182	187	71	67
Career intentions												
Continuing	0	10	8	16	19	23	27	31	5	6	59	86
Undecided	0	5	9	16	42	19	7	5	0	1	58	46
Separating	0	0	0	0	9	4	11	0	1	1	21	5
Mean number of months to separation	0	0	0	0	14	19	6.4	0	unk.	unk.	9.6	19
Marital status												
Never married	0	10	9	13	18	12	0	3	0	0	27	38
Married	0	5	7	18	51	32	39	32	6	8	103	95
Divorced	0	0	0	1	1	1	6	1	0	0	7	3
Separated	0	0	0	0	0	1	0	0	0	0	0	1

*NOTE: Classification data were not available on all the respondents, thus the summary totals will not equal the actual population size.

Additional sociodemographic background characteristics revealed that 14% of the respondents came from rural areas (< 2,500 population), 27% represented metropolitan statistical areas (>250,000 population), and 59% came from nonmetropolitan statistical areas.

Fathers' occupations included professional and technical workers (32.4%), managers and administrators (19.1%), active military personnel (9.6%), craftsmen (9.2%), sales (7.6%), retired civilian (6.8%), and retired military (6.8%). Other occupations were operatives (2.0%), laborers (9.0%), farmers (1.6%), and service workers (1.2%).

Spouses' occupations were reported as homemaker (39.9%), professional and technical workers (32.8%), managers and administrators (11.6%), and clerical workers (7.1%). Other occupations included sales (3.5%), military personnel (3.0%), services (1.5%), and operatives (0.5%).

APPENDIX B

This appendix contains detailed results for key component categories of the CMI (11). The highest ranking variables, the factor structure, and the between groups analyses are presented.

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A. **Reasons for Choosing a Naval Aviation Career.** As shown in Table B-1, both the continuing group and the separating group indicated 'to fly jets' as the primary reason for choosing a naval aviation career. 'To have a meaningful job' was ranked second and 'best flight training available' ranked third for the continuing group, while the opposite was true for the separating group. Of particular interest was the finding that 'opportunity for independence' was rated much higher (ranked 4th) among those separating as compared to those continuing (ranked 10th, not shown in the table). 'Love of country' was more important among the continuing group (ranked 5th) than for the separating group (ranked 9th).

TABLE B-1

**Means and Rankings of Five Leading Reasons for Choosing
a Naval Aviation Career by Career Intention (N = 275)**

Reason	Overall <u>M</u> Ranking	Continuing <u>M</u> Ranking	Separating* <u>M</u> Ranking
To fly jets	6.36 1	6.32 1	6.38 1
Best flight training available	5.66 2	5.46 3	5.92 2
To have a meaningful job	5.57 3	5.62 2	5.46 3
Leadership opportunity	5.25 4	5.37 4	5.00 6
Love of country	5.18 5	5.19 5	4.50 9

* Ranked 4th and 5th for this group were 'opportunity for independence' (M = 5.28) and 'opportunity for responsibility' (M = 5.19).

Factor Structure of Reasons for Choosing a Naval Aviation Career. Table B-2 shows the results of a factor analysis that examined reasons for choosing a naval aviation career. Five factors accounted for 57% of the variance. Factor I (LEADERSHIP) is comprised of four variables. These variables, as shown in Table B-2, included 'opportunity for responsibility,' 'leadership opportunity,' 'challenge of being a naval officer,' and 'love of country.' The 'opportunity for responsibility' variable loaded the highest on this factor with both 'leadership opportunity' and 'challenge of being a naval officer' entering with moderate factor loadings. The 'love of country' variable also loaded positively on this factor, although at a somewhat lower magnitude. An individual with a high score on this variable placed significant importance on responsibility in the work, along with opportunities for positively influencing others.

TABLE B-2

Reasons Individuals Choose Naval Aviation (N = 275)

	I	II	Factors III	IV	V
Opportunity for responsibility	.819				
Leadership opportunity	.779				
Challenge of being a naval officer	.716				
Love of country	.586				
Job security		.807			
Financial growth		.682			
To have a meaningful job		.510			
To fly jets			.832		
Wanted the ACM environment			.723		
Best flight training available			.604		
Navy had best looking uniform				.727	
Navy had best public relation				.714	
Negative influence from others toward the other services				.592	
Opportunity for travel					.684
Way to leave hometown					.668
Opportunity for independence					.523
Eigenvalue	2.652	1.717	1.709	1.573	1.509

Factor II was defined as FINANCIAL and consisted of three variables, which were 'job security,' 'financial growth,' and 'to have a meaningful job.' Of these three variables, 'job security' had the highest factor loading, whereas 'financial growth' and 'to have a meaningful job' loaded moderately on this factor. Individuals scoring high on this factor probably entered the field due to monetary concerns.

Factor III (JET/FLIGHT OPPORTUNITIES) consisted of three variables, which included 'to fly jets,' 'wanted the ACM environment,' and 'best flight training available.' The 'to fly jets' variable yielded the highest factor loadings, with 'wanted the ACM environment' and 'best flight training available' showing moderate loadings.

Factor IV was defined as a SUPERFICIAL factor and consisted of three items: 'Navy had the best looking uniform,' 'Navy had the best public relations,' and 'negative influence from others toward the other services.' Of these three variables, 'best looking uniform' and 'best public relations' shared moderately high factor loadings with the 'influence' variable contributing a positive but low loading.

Factor V was defined as PERSONAL TRAVEL OPPORTUNITIES. Variables with a significant loading on this factor were 'opportunity for travel,' 'way to leave

hometown,' and 'opportunity for independence.' Both 'opportunity for travel' and 'way to leave hometown' variables showed similar moderate factor loadings. Although contributing positively, 'opportunity for independence' displayed the lowest magnitude in terms of factor loading.

Group Differences of Reasons for Choosing a Naval Aviation Career. The means and standard deviations for the five factors by rank and designation are given in Table B-3 and by career intention in Table B-4. An analysis of variance indicated a significant difference for rank on the JET/FLIGHT OPPORTUNITIES factor ($F_{4, 273} = 3.96, p < .0004$), and a significant difference for designation on the PERSONAL TRAVEL OPPORTUNITIES factor ($F_{1, 273} = 5.16, p < .03$). A Duncan post-hoc analysis had indicated that O-5s evaluated jet/flight opportunities significantly lower than O-2s through O-4s ($MSE = 1.30, df = 266, p < .05$) as a reason for choosing a naval aviation career. The analysis showed that pilots had a lower mean evaluation for personal travel opportunities than RIOs.

TABLE B-3

Means and Standard Deviations of Factors Contributing to Choosing a Naval Aviation Career by Rank and Designation ($N = 275$)

Factor	0-1		0-2		0-3		0-4		0-5									
	Pilots M	Pilots SD	Pilots M	Pilots SD	Pilots M	Pilots SD	Pilots M	Pilots SD	Pilots M	Pilots SD								
Leadership	4.95	1.06	5.22	1.12	5.41	0.66	4.85	1.03	5.14	1.01	4.79	1.21	5.22	1.15	4.75	0.69	5.06	1.22
Financial	4.24	1.03	4.22	1.07	4.41	1.32	4.36	1.07	4.57	0.97	4.55	0.99	4.68	1.03	4.39	0.57	4.08	1.68
Jet flight opportunities	5.04	1.27	6.08 ^b	1.06	5.65 ^b	0.92	5.68 ^b	1.23	5.57 ^b	1.16	5.72 ^b	1.13	5.07 ^b	1.21	4.33 ^a	1.03	4.92 ^a	0.68
Superficial	1.69	1.02	1.78	1.03	1.70	0.65	1.50	0.73	1.64	0.81	1.52	0.81	1.56	0.94	1.00	0.56	1.75	0.85
Personal travel opportunities	3.60	1.12	2.75	1.02	3.52	0.84	3.23	1.05	3.33	1.10	3.14	1.10	3.13	1.05	2.33	0.70	3.08	0.87

Note: Means with different letters are significantly different ($p < .05$) using post-hoc analyses.

TABLE B-4

**Means and Standard Deviations of Factors Contributing to Choosing
a Naval Aviation Career by Career Intention (N = 275)**

Factor	Continuing		<u>Career Intention</u> Separation		Undecided	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Leadership	5.08	1.10	4.81	1.36	5.02	0.89
Financial	4.57	1.09	4.41	1.14	4.29	1.02
Jet flight opportunities	5.40	1.15	5.62	1.16	5.68	1.20
Superficial	1.50	0.83	1.54	0.71	1.71	0.82
Personal travel opportunities	3.08 ^a	1.00	3.88 ^b	1.05	3.24 ^a	1.05

Note: Means with different letters are significantly different ($p < .05$) using post-hoc analyses.

Analyses of variance for career intention yielded a significant difference only for the PERSONAL TRAVEL OPPORTUNITIES factor ($F_{2, 272} = 6.80, p > .0001$). A Tukey studentized range test indicated that separating aviation officers (SAOs) evaluated this dimension significantly higher than continuing aviation officers (CAOs) or those who were undecided in their career intentions ($MSE = 1.05, df = 272, p < .05$).

B. **Career Goals.** Both SAO and CAO groups agreed that to 'remain in a flying billet' was the primary career goal (Table B-5). The SAOs ranked 'assignment to desirable geographic location' as the second most important goal compared to seventh for the CAOs. The reverse was true for the 'squadron commanding officer' item. The SAOs included 'travel' among its top 10 goals, while the CAOs did not. Finally, SAOs placed less emphasis on 'department head' as a career goal.

TABLE B-5

Mean Scores of Ten Leading Career Goals by Career Intention (N = 275)

	Overall		Continuing		Separating*	
	<u>M</u>	Ranking	<u>M</u>	Ranking	<u>M</u>	Ranking
To remain in flying billet	6.09	1	6.12	1	6.15	1
Recognition of professional excellence	5.52	2	5.48	3	5.38	3
Squadron commanding officer	5.32	3	5.74	2	4.38	7
Rank promotion	5.24	4	5.32	5	4.96	5
Increased professionalism	5.19	5	5.41	4	5.00	4
Assignment to desirable geographic location	5.13	6	4.95	7	5.58	2
Mission commander	4.97	7	4.89	8	4.77	6
Department head	4.86	8	5.36	6	3.81	10
Increased managerial skills	4.57	9	4.78	9	4.19	9
1000 hour point or more (F-14)	4.53	10	4.61	10	3.60	11

* Ranked 8th for this group was 'travel' (M = 4.23).

Factor Structure of Career Goals. Table B-6 presents the results of a factor analysis that examined variables contributing to the fulfillment of an aviator's career goals. Six factors accounted for 61% of the variance.

TABLE B-6

**Factors Contributing to the Fulfillment
of an Aviator's Career Goals (N = 275)**

	I	II	Factors		V	VI
			III	IV		
Top gun squadron assignment	.871					
Fighter Weapons School instructor	.859					
Test Pilot School	.825					
1000 hour point or more (F-14)	.707	.446				
Division officer		.790				
Increased managerial skills		.745			.409	
Commanding officer, squadron			.836			
Department head		.464	.657			
Naval War College assignment			.503			
Assignment to desirable geographic location				.735		
Remain in flying billet				.719		
Have impact on non-operational matters					.669	
Increased professionalism					.535	
Private pilot's license						.680
NROTC instructor						.671
Travel				.450		.501
Rank promotion			.452		.457	
Additional formal college education					.443	.462
1000 traps	.485		.452			
Recognition of professional excellence					.461	
Mission commander		.462				
Eigenvalue	3.484	2.310	2.171	1.865	1.856	1.855

Factor I may be defined as FLIGHT GOALS. The highest loading variables on this factor were: 'top gun squadron assignment,' 'Fighter Weapons School instructor,' and 'Test Pilot School.' The '1000 hour point or more (F-14)' variable produced a relatively moderate loading on the flight goals factor. An individual scoring high on this factor seeks fulfilling professional interests and takes advantage of opportunities in aviation provided by the military.

Factor II (LEADERSHIP GOALS) is comprised of two variables: 'division officer' and 'increased managerial skills.' Both variables achieved loadings within the moderate range. Factor III (LONG-TERM CAREER PATH GOALS) consists of

three variables: 'squadron commanding officer,' 'department head,' and 'Naval War College assignment.' The highest loading factor was the 'desire to be a commanding officer of a squadron,' followed by 'department head' with a moderate loading, and 'Naval War College assignment' with a low factor loading. Individuals scoring high on this factor are concerned with leadership and professional development. Factor IV was defined as DUTY ASSIGNMENT. Variables loading significantly on this factor were 'assignment to desirable geographic location' and 'remain in flying billet.' The factor loadings indicated equal importance of these two variables. Factor V was identified as PROFESSIONAL GROWTH AND TRAINING. The variables loading highest on this factor were 'having impact on non-operational matters' and 'increased professionalism.' Factor VI, defined as DIVERSIFIED EDUCATION, was composed of three variables. The 'private pilot's license' variable received the highest factor loading, followed by 'NROTC instructor,' and then 'travel.'

Group Differences in Career Goals. Means and standard deviations for the six factors by rank and designation are given in Table B-7 and by career intention in Table B-8. Significant differences by rank were found for FLIGHT GOALS ($F_{4, 273} = 23.27, p < .0001$), LEADERSHIP GOALS ($F_{4, 273} = 4.06, p < .003$), and DIVERSIFIED EDUCATION GOALS ($F_{4, 273} = 7.29, p < .0001$). Pilots were significantly lower than RIOs on LEADERSHIP GOALS ($F_{1, 273} = 5.22, p < .02$), LONG-TERM CAREER PATH GOALS ($F_{1, 272} = 4.48, p < .03$), PROFESSIONAL GROWTH AND TRAINING GOALS ($F_{1, 273} = 3.82, p < .05$), and DIVERSIFIED EDUCATION GOALS ($F_{1, 273} = 14.73, p < .0002$).

TABLE B-7

Means and Standard Deviations of Career Goal Factors by Rank and Designation ($N = 275$)

Factor	0-1		0-2		0-3		0-4		0-5									
	Pilots M	SD	Pilots M	SD	RIOs M	SD	Pilots M	SD	RIOs M	SD								
Flight goals	4.84 ^a	1.56	4.98 ^a	1.36	4.83 ^a	1.30	4.32 ^a	1.46	4.05 ^a	1.46	3.00 ^b	1.48	2.61 ^b	1.06	2.70 ^b	1.28	2.87 ^b	1.12
Leadership goal	4.62 ^a	1.08	4.24 ^a	1.32	4.67 ^a	1.10	4.22	1.08	4.84	1.14	3.71 ^b	1.09	4.10 ^b	0.86	4.25	0.89	4.53	1.74
Long-term career path	4.65	1.14	4.58	1.01	4.77	0.80	4.58	1.21	4.77	1.09	4.44	0.96	5.18	0.99	5.00	0.54	5.40	1.03
Duty assignment	4.76	0.91	5.41	1.24	5.31	0.87	4.92	1.00	4.99	0.94	4.84	1.10	4.85	1.23	4.61	1.39	5.17	1.10
Professional growth & training	4.72	1.02	4.66	0.98	4.74	0.87	4.45	0.97	4.83	0.87	4.17	0.90	4.67	0.84	4.40	0.55	4.65	0.91
Diversified education goals	3.42 ^a	1.03	3.01 ^a	0.96	3.54 ^a	0.89	2.76	0.84	3.24	1.02	2.25 ^b	0.76	2.80 ^b	1.09	1.83 ^b	0.70	2.69 ^b	0.83

Note: Means with different letters across a factor are significantly different ($p < .05$) using post-hoc analyses.

TABLE B-8

**Means and Standard Deviations of Career Goal
Factors by Career Intention (N = 275)**

Factor	Career Intention					
	Continuing		Separating		Undecided	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Flight goals	3.88 ^b	1.62	3.06 ^a	1.52	4.10 ^b	1.53
Leadership goals	4.42 ^b	1.16	3.79 ^a	1.33	4.28 ^b	1.06
Long-term career path	4.98 ^b	0.92	4.00 ^a	1.27	4.55 ^b	1.08
Duty assignment	4.86	1.05	5.32	1.06	5.06	1.03
Professional growth & training	4.62	0.93	4.22	1.13	4.57	0.84
Diversified education goals	2.81	1.04	2.59	1.06	3.06	0.90

Note: Means with different letters across a factor are significantly different ($p < .05$) using post-hoc analyses.

A Tukey post-hoc analysis indicated that 0-4s and 0-5s were significantly lower in their emphasis on FLIGHT GOALS than 0-1s through 0-3s ($MSE = 1.92$, $df = 266$, $p < .05$). Duncan's multiple range test for LEADERSHIP GOALS and DIVERSIFIED EDUCATION GOALS indicated that 0-4s were significantly lower in their evaluation of LEADERSHIP GOALS than 0-1s and 0-2s ($MSE = 1.22$, $df = 266$, $p < .05$), and 0-4s and 0-5s were significantly lower than 0-1s and 0-2s in their evaluation of DIVERSIFIED EDUCATION GOALS as a contribution to career goals ($MSE = .84$, $df = 266$, $p < .05$).

Analyses of variance for career intention yielded a significant difference for FLIGHT GOALS ($F_{2, 272} = 4.48$, $p < .01$), LEADERSHIP GOALS ($F_{2, 272} = 3.42$, $p < .03$), LONG-TERM CAREER PATH GOALS ($F_{2, 272} = 12.75$, $p < .0001$), and DIVERSIFIED EDUCATION GOALS ($F_{2, 272} = 3.19$, $p < .04$). Tukey post-hoc analyses indicated SAOs had significantly lower scores for FLIGHT GOALS ($MSE = 2.49$, $df = 272$, $p < .05$), compared to the CAO and undecided groups.

C. Career satisfiers.

Factor Structure of Career Satisfiers. Table B-9 illustrates factors contributing to career satisfaction among aviators. Six factors accounted for 58% of the variance. Factor I was SUBORDINATE LEADERSHIP, which was comprised of five management-oriented variables. The variables 'resolving problems for the troops' and 'seeing subordinates achieve' received the highest factor loadings. 'Being able to positively influence subordinates' was characteristic of individuals scoring high on this factor.

TABLE B-9

Factors Contributing to an Aviator's Career Satisfaction (N = 275)

	I	II	Factors III	IV	V	VI
Resolving problems for the troops	.775					
Seeing subordinates achieve	.700					
Ability to impact important decision	.689					
Leadership over the troops	.652					
Personal discipline	.541					
Feeling of power		.786				
Feeling of control		.771				
Constant opportunity to excel	.477	.615				
Thrill of changing environment		.615				
Responsibility at an early age	.488	.563				
Public recognition			.665			
Peer recognition			.639			
Knowing you can do something that few others can do		.420	.565			
Eliticism			.533			
Actual combat flying			.504			
Travel				.846		
Port calls				.777		
Sense of doing something important					.715	
High quality/caliber of colleagues					.653	
Professionally competent					.605	
Firing weapon systems						.638
ACM			.427			.605
Enjoyment of flying F-14						.540
Social life				.400		
Camaraderie				.400		
Exposure to high-tech equipment		.432				
Respect from subordinates	.462					
Eigenvalue	4.033	3.487	2.697	2.308	2.278	2.091

Factor II was defined as POWER MOTIVATION and was based on five variables that included 'feeling of power,' 'feeling of control,' 'constant opportunity to

excel,' 'thrill of changing environment,' and 'responsibility at an early age.' Both 'feeling of power' and 'feeling of control' loaded the highest on this factor, with the other variables loading more moderately. An individual scoring high on this factor attributed qualities such as power, control, and responsibility to career satisfaction.

Factor III emphasizes RECOGNITION. Variables loading significantly on this factor included 'public recognition,' 'peer recognition,' 'knowing you can do something that few others can do,' 'elitism,' and 'actual combat flying.' Two variables, public recognition and peer recognition, were the highest loading variables. For those scoring high on this factor, it appears that belonging to a unique and identifiable group is an important contributor to career satisfaction. Factor IV is defined as TRAVEL and consists of two variables, 'travel' and 'port calls.' Both of these achieved relatively high factor loadings. Factor V was defined as PROFESSIONAL ACHIEVEMENT. The three variables that comprise this factor are concerned with 'making a valuable contribution,' 'being surrounded by colleagues of high caliber,' and 'being professionally competent.' Factor VI was defined as TACTICAL AIRCRAFT FLYING. Those variables loading significantly on this factor included 'firing weapons systems,' 'ACM,' and 'enjoyment of flying the F-14.'

Group Differences Among Career Satisfiers. Means and standard deviations for the six factors in this category by rank and designation are given in Table B-10 and by career intention in Table B-11. Significant differences were found for the SUBORDINATE LEADERSHIP factor across rank ($F_{4, 274} = 2.69, p < .03$) and designation ($F_{1, 274} = 4.95, p < .03$). Radar intercept officers indicated a greater contribution of leading subordinates to career satisfaction than did pilots. A Duncan post-hoc analysis revealed that O-5s were significantly higher in their evaluation of the contribution of subordinate leadership to career satisfaction than all other rank groups ($MSE = 1.06, df = 266, p < .05$).

Means and Standard Deviations of Career Satisfaction Factors 1, Rank and Designation (N = 275)

Factor	0-1			0-2			0-3			0-4			0-5					
	Pilots		RIOs	Pilots		RIOs	Pilots		RIOs	Pilots		RIOs	Pilots		RIOs			
	M	SD		M	SD		M	SD		M	SD		M	SD		M	SD	
Subordinate leadership	4.86 ^a	0.97	4.70 ^a	1.36	4.99 ^a	1.15	4.58 ^a	1.13	4.88 ^a	0.91	4.72 ^a	0.95	5.31	0.85	5.39 ^b	0.74	5.77 ^b	0.79
Power motivation	5.00	0.83	5.24	1.35	5.04	1.15	4.78	1.23	4.92	1.31	4.51	1.13	5.13	0.84	5.17	1.30	5.75	0.80
Recognition	5.02	0.79	4.86	1.46	5.24	0.80	5.13	1.20	5.27	1.16	4.99	0.92	5.02	1.21	5.33	1.33	5.17	0.76
Social benefits	4.53	0.84	4.54	1.44	4.84	0.97	4.58	1.09	4.55	0.99	4.26	1.22	4.51	1.19	4.58	1.13	4.97	1.05
Professional achievement	5.71	0.80	6.08	0.78	5.97	0.82	5.87	0.98	5.86	0.80	5.76	0.85	6.01	0.68	6.28	0.65	6.33	0.62
Tactical aircraft flight	5.24	1.29	5.67	1.58	6.11	0.92	5.73	1.03	6.01	1.03	5.58	1.03	5.64	0.99	5.61	1.31	5.83	0.98

Note: Means with different letters are significantly different ($p < .05$) using post-hoc analyses.

TABLE B-11

**Means and Standard Deviations of Career Satisfaction
Factors by Career Intention (N = 275)**

Factor	Continuing		Career Intention Separating		Undecided	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Subordinate leadership	5.01	1.08	4.61	1.21	4.75	0.96
Power motivation	4.90	1.16	4.56	1.36	5.02	1.11
Recognition	4.99	1.14	5.23	1.11	5.25	1.01
Social benefits	4.42	1.12	4.63	1.10	4.72	1.08
Professional achievement	5.97	0.77	5.60	1.06	5.88	0.86
Tactical aircraft flight	5.75	1.13	5.55	1.22	5.81	0.98

Analyses of variance for career intention yielded a significant difference only for the SUBORDINATE LEADERSHIP factor ($F_{2, 272} = 2.87, p < .06$). Although a Duncan post-hoc analysis did not indicate a significant difference, SAOs evaluated this factor lower than both other groups.

D. Reasons to remain in naval aviation.

Factor Structure of Reasons to Remain in Naval Aviation. The major factors with their underlying variables of reasons to continue a career in naval aviation are given in Table B-12. Seven factors accounted for 64% of the variance.

TABLE B-12

Factors Contributing to a Decision to Remain in Naval Aviation (N = 275)

	<u>Factors</u>						
	I	II	III	IV	V	VI	VII
Opportunity to excel	.812						
Attainment of high degree of responsibility	.804						
Leadership opportunity	.719						
Anticipation of achieving command	.613						
Competitiveness	.570						
Challenge of the career	.518	.470					
Excellent quality of colleagues		.791					
Camaraderie		.716					
Peer recognition		.638					
Self esteem due to career	.486	.616					
Enjoy different lifestyle			.789				
Travel opportunity			.630				
Fast-paced lifestyle			.621				
Chance to fulfill a dream			.552				
Enjoyment of power to control	.401		.506				
Financial compensation				.809			
Aviation bonus in general				.725			
Military benefits				.583			
Rank promotion		.453		.501			
Anticipation of new, more sophisticated aircraft					.732		
Flying					.711		
Ability to develop new tactics/techniques					.500		
Sense of doing something worthwhile						.582	
Prestige		.462				.500	
Family tradition							.766
Spouse's career or education							.727
Eigenvalue	3.994	3.119	2.717	2.322	2.226	1.540	1.372

Factor I was defined as PROFESSIONAL GROWTH. The variables included within this factor were primarily concerned with career growth and enhancement opportunities. For those scoring high on this factor, a need to excel and receive recognition for their performance is reflected.

Factor II was defined as PEER SUPPORT. The variables describing this factor was 'camaraderie,' 'peer recognition,' and 'quality of colleagues.' It appears that colleagues are a potential force in the decision to continue a naval aviation career for those scoring high on this factor.

Factor III was described as MILITARY AVIATION LIFESTYLE. The five variables that constituted this factor focused on the 'enjoyment of different lifestyles,' 'opportunities for travel,' and 'experiencing a fast-paced lifestyle in general.' For those scoring high on this factor, it is clear that changing environments and varied routines are desirable and do indeed play a part in the decision to remain in naval aviation.

Factor IV was defined as FINANCIAL SECURITY. The variables that underlie this factor were 'monetary compensation,' 'aviation career incentive bonus,' 'basic military benefits,' and 'rank promotion.' Of these, 'monetary compensation' received the highest factor loading. An individual scoring high on this factor is concerned about financial matters, and the aviation career incentive bonus would figure highly in a decision concerning continuation in naval aviation.

Factor V was identified as CHALLENGING FLYING EXPERIENCES. The variables that this factor is based upon encompassed the 'anticipation of new, more sophisticated aircraft,' 'flying,' and 'ability to develop new tactics/techniques.' Of these variables, the highest factor loadings were 'anticipation of new aircraft' and 'flying.' Factor VI was defined as SELF-ESTEEM and is a composite of two variables: 'sense of doing something worthwhile' and 'prestige.' Both of these variables achieved moderate factor loadings. Factor VII was defined as FAMILY SUPPORT and consisted of the variables 'family tradition' and 'spouses career or education.'

Group Differences for Reasons to Remain in Naval Aviation. Means and standard deviations for the seven factors related to reasons to continue a naval aviation career are given in Table B-13 by rank and designation and in Table B-14 by career intention. Significant differences were found across rank for PROFESSIONAL GROWTH ($F_{4, 274} = 2.39, p < .05$) and CHALLENGING FLYING EXPERIENCES ($F_{4, 274} = 3.98, p < .004$). No significant differences were found across designation or the interaction of rank and designation.

Means and Standard Deviations of Factors Contributing to a Decision to Remain in Naval Aviation by Rank and Designation ($N = 275$)

Note: Means with different letters across a factor are significantly different ($p < .05$) using post-hoc analyses.

TABLE B-14

**Means and Standard Deviations of Factors Contributing to A Decision
to Remain in Naval Aviation by Career Intention (N = 275)**

Factor	Continuing		Career Intention Separating		Undecided	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Professional growth	5.25 ^a	1.08	4.48 ^b	1.59	4.90	1.06
Peer support	5.16	1.09	4.80	1.44	5.07	0.89
Military aviation lifestyle	4.14	1.08	3.76	1.19	4.09	1.21
Financial/security	4.85	1.21	4.36	1.49	4.82	1.22
Challenging flying experience	5.47	1.16	5.06	1.33	5.59	1.02
Self esteem	5.13	1.06	4.81	1.53	4.98	1.10
Family support	1.96	1.47	5.49	1.04	2.12	1.51

Note: Means with different letters are significantly different ($p < .05$) using post-hoc analyses.

A Tukey analysis indicated that O-5s were significantly higher than all other rank groups in their evaluation of PROFESSIONAL GROWTH as a reason to remain in naval aviation ($MSE = 1.27$, $df = 266$, $p < .05$). A Duncan analysis revealed that O-2s evaluated the challenges of flying as a significantly higher contribution to remain in naval aviation than O-1s and O-4s, and that O-3s gave higher evaluations to this factor than O-1s ($MSE = 1.22$, $df = 266$, $p < .05$).

Analyses of variance for career intention yielded a significant difference only for the factor PROFESSIONAL GROWTH ($F_{2, 272} = 6.39$, $P < .002$). A Tukey post-hoc analysis indicated that SAOs evaluated PROFESSIONAL GROWTH significantly lower than CAOs ($MSE = 1.27$, $df = 272$, $p < .05$).

E. Source of Support

Factor Structure of Source of Support Variables. Table B-15 presents the factors that underlie sources of support from fellow aviators. Four factors accounted for 65% of the cumulative variance. Factor I was defined as PEER RESPECT and was delineated by the variables 'peer respect,' 'recognition,' and 'trust.'

TABLE B-15

Factors of Support from Fellow Aviators (N = 275)

	Factors			
	I	II	III	IV
Peer respect	.848			
Recognition	.807			
Trust	.711			
Mutual concern of spouse during separation		.761		
Appreciation		.709		
Establish personal identity		.623		
Morale	.434	.556		
Group unity to initiate change and have impact		.522		.489
Common base of experience			.820	
Similar attitudes			.722	
Camaraderie	.496		.565	
Knowledge sharing			.523	
Competition				.844
A way to measure your performance				.719
Constructive criticism				.596
Social life			.495	
Eigenvalue	3.139	2.792	2.606	2.594

Factor II was defined as GROUP INTERACTION and consisted of five variables that ranged from 'mutual concern of spouses' to 'morale.' The highest factor loadings were on the 'mutual concern of spouses' and the 'appreciation' variables. 'Establish personal identity,' 'morale,' and 'group unity' all had low to moderate factor loadings.

Factor III was termed COMMON IDENTITY. Variables that loaded significantly on this factor were 'common base of experience' and 'similar attitudes.' The 'camaraderie' and 'knowledge sharing' items received relatively low factor loadings. For individuals scoring high on this factor, the components of 'common experiences' and 'similar attitudes' might be viewed as important constituents of their support systems.

Factor IV was defined as COMPETITION and was composed of three variables. The 'competition' variable had the highest factor loading, with both 'a way to measure your performance' and 'constructive criticism' variables reaching moderate loadings. Aviators scoring high on this factor were concerned about their performance in comparison to others in a positive, strengthening sense.

Group Differences Among Source of Support Factors. Means and standard deviations for the four factors by career intention are given in Table B-16 and by rank and designation in Table B-17. No significant differences by rank, designation, or career intention were found across any of the factors.

TABLE B-16

**Means and Standard Deviations of Source of Support
Factors by Career Intention (N = 275)**

Factor	Continuing		<u>Career Intention</u> Separating		Undecided	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Peer respect	5.49	1.04	5.31	1.50	5.49	1.20
Group interaction	4.77	1.13	4.64	1.44	4.56	1.21
Common identity	5.17	0.88	5.06	1.27	5.07	1.10
Competition	5.02	1.06	4.55	1.37	4.79	1.15

Means and Standard Deviations of Source of Support Factors by Rank and Designation ($N = 275$)

Factor	0-1		0-2		0-3		0-4		0-5									
	Pilots M	SD	Pilots M	SD	Pilots M	SD	Pilots M	SD	Pilots M	SD								
Peer respect	5.38	1.16	5.43	1.26	5.78	0.95	5.49	1.24	5.38	1.09	5.36	1.29	5.47	1.01	5.72	0.71	5.33	1.36
Group interaction	4.49	0.89	4.49	1.14	4.87	1.02	4.70	1.26	4.85	1.11	4.41	1.31	4.68	1.22	4.93	1.26	4.82	1.41
Common identity	4.88	1.23	5.28	1.01	5.29	0.95	5.24	0.97	5.27	0.87	4.86	1.18	4.98	0.95	4.33	1.01	5.44	0.58
Competition	4.73	0.94	5.04	1.54	5.26	1.15	4.86	1.17	4.91	1.14	4.57	1.13	4.97	1.01	4.67	0.30	5.12	0.91

F. Career Dissatisfiers. As demonstrated in Table B-18, leading career dissatisfiers were centered around the nature of 'long deployment.' 'Family separation' was rated the primary career dissatisfier, followed closely by 'extended deployment' for the SAOs. The CAOs were more dissatisfied with 'inadequate time allocated for flying duties' (ranked 2nd), while the SAOs rated this item sixth. Additionally, the CAOs were more dissatisfied with 'military pay increases not keeping up with cost of living,' but less dissatisfied with 'extensive work-ups for cruises' and 'outlook of continued extended personal sacrifice.'

TABLE B-18

Means of Ten Leading Career Dissatisfiers by Career Intention (N = 275)

	Overall		Continuing		Separating*	
	<u>M</u>	Ranking	<u>M</u>	Ranking	<u>M</u>	Ranking
Family separation	6.04	1	5.74	1	6.46	1
Extended deployment	5.94	2	5.56	3	6.44	2
Inadequate time allocated to flying duties	5.78	3	5.62	2	5.64	6
Insufficient port calls during cruises	5.26	4	4.97	7	5.80	5
Long work days during shore tours	5.25	5	5.05	4	5.56	7
Outlook of continued extended personal sacrifice	5.18	6	4.65	9	6.08	4
Removed from flying billet to strictly desk job	5.17	7	5.02	6	4.84	8
Military pay increases not keeping pace with cost of living	5.03	8	5.04	5	4.28	10
Extensive work-ups for cruises	5.02	9	4.80	8	6.09	3
Lack of authority coupled with greater responsibility	4.24	10	4.07	10	4.24	11

* Ranked 9th for this group was 'frustration over no personal input in decision making process' (M = 4.44).

Factor Structure of Career Dissatisfiers. Table B-19 depicts the factors and their associated variables that were found to contribute to career dissatisfiers. Four factors accounted for 51% of the variance. Factor I was defined as GROUP CONFLICT, and the variables represent a number of negative attributes. The highest factor loading was 'severe competitiveness' followed by 'strict adherence to regulations.' A moderate factor loading was obtained on the variable 'personality conflicts with peers.' For those scoring high on this factor, 'excessive competitiveness' and 'strict regulations' may contribute significantly to their decision to leave the service.

TABLE B-19

Factors Contributing to Career Dissatisfiers (N = 275)

	Factors			
	I	II	III	IV
Severe competitiveness	.808			
Strict adherence to regulations	.726			
Personality conflicts with peers	.696			
Overemphasis on personal mistakes	.694			
Personnel inspections	.673			
All suffer in squadron due to the mistakes of one individual	.622			
Job becomes too demanding	.596			
Military pay increases not keeping pace with cost of living		.783		
Long work days during shore tours		.723		
Inadequate time allocated to flying duties		.664		
Frustration over no personal input in decision making process			.714	
Lack of authority coupled with greater responsibility			.695	
Lack of moral integrity on the part of seniors	.473		.533	
Extended deployment				.849
Family separation				.820
Extensive work-ups for cruises				.584
Outlook of continued extended personal sacrifice			.416	.563
No training provided for collateral duties	.401			
Insufficient port calls during cruises		.489		
Lack of respect	.469		.430	
Eigenvalue	4.485	2.655	2.420	2.393

Factor II was defined as the COSTS/BENEFITS RATIO. Of the three variables underlying this factor, 'military pay increases not keeping pace with the cost of living' was the highest loading factor. The variable 'long work days during shore tours' also loaded highly. The 'inadequate time allocated to flying duties' item loaded moderately on this factor.

Factor III was defined as LIMITED DECISION INPUTS and consisted of three variables. The variables were concerned with 'frustration over no personal input in the decision-making process' (highest factor loading) to 'lack of moral

integrity' on the part of seniors (lowest factor loading). An individual that scores high on this factor indicated that he does not possess sufficient control over input to decision making.

Factor IV was described as the PERSONAL SACRIFICE factor. The variables associated with this factor were 'extended deployment,' 'family separation,' 'extensive work-ups for cruises,' and 'outlook of continued extended personal sacrifice.' The variables with the highest factor loadings were 'extended deployment' and 'family separation.' The two remaining factors had moderate factor loadings. Major reasons for leaving the service for those scoring high on this factor revolve around long separations from family and separations that go beyond those that were anticipated.

Group Differences for Career Dissatisfiers. Means and standard deviations for pilots and RIOs across the four retained factors are given in Table B-20 and by career intention in Table B-21. Significant differences across rank were found for the COSTS/BENEFITS RATIO ($F_{4, 274} = 3.58, p < .007$) and PERSONAL SACRIFICE ($F_{4, 274} = 9.06, p < .0001$). Scheffe's test for group differences indicated a difference for COSTS/BENEFITS RATIO between O-3s and O-1s; O-3s were significantly more dissatisfied with the ratio of costs to benefits. The O-1s were also found to evaluate PERSONAL SACRIFICE significantly lower than all other rank groups using a Duncan analysis ($MSE = 1.42, df = 266, p < .05$). No significant differences between pilots and RIOs were found with respect to career dissatisfiers.

TABLE B-21

**Means and Standard Deviations of Career Dissatisfaction.
Factors by Career Retention (N = 275)**

Factor	Career Intention					
	Continuing		Separating		Undecided	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Group conflict	2.46	1.03	2.59	1.10	2.73	1.21
Costs/benefits ratio	5.20	1.19	4.96	1.64	5.53	1.22
Limited decision inputs	3.77	1.48	3.92	1.48	4.22	1.55
Personal sacrifice	5.10 ^b	1.26	5.96 ^a	1.55	5.82	1.07

Note: Means with different letters are significantly different ($p < .05$) using post-hoc analyses.

Analyses of variance for career intention yielded significant differences for the factors COST/BENEFITS RATIO ($F_{2, 272} = 2.76, p < .06$) and PERSONAL SACRIFICE ($F_{2, 272} = 12.94, p < .0001$). A Tukey post-hoc analysis indicated that SAOs evaluated PERSONAL SACRIFICE significantly higher than CAOs as a reason to leave naval aviation ($MSE = 1.50, df = 272, p < .05$).

Means and Standard Deviations of Career Dissatisfaction Factors by Rank and Designation ($N = 275$)

Note: Means with different letters across a factor are significantly different ($p < .05$) using post-hoc analyses.

G. Background Variables Contributing to Effective Preparation for a Naval Aviation Career. No substantial variation in the between-group rank order of background variables was found except for two items (Table B-22). 'Time management skills' was ranked notably higher by the CAOs, while the opposite was true for the 'accustomed to fast learning process' item.

Background factors evaluated as to their effectiveness in preparation or assistance in an aviator's naval aviation career were, in descending order of importance: ability to focus concentration ($\bar{M} = 5.86$, $\underline{SD} = 1.07$), time management skills ($\bar{M} = 5.60$, $\underline{SD} = 1.14$), leadership skills ($\bar{M} = 5.50$, $\underline{SD} = 1.28$), dealing with other individuals ($\bar{M} = 5.46$, $\underline{SD} = 1.12$), and general maturity ($\bar{M} = 5.44$, $\underline{SD} = 1.26$). Personality traits perceived to contribute to becoming a naval aviator were: common sense ($\bar{M} = 6.22$, $\underline{SD} = .98$), responsible ($\bar{M} = 6.20$, $\underline{SD} = .76$), aggressive ($\bar{M} = 6.09$, $\underline{SD} = 1.00$), self-confident ($\bar{M} = 6.07$, $\underline{SD} = .99$), and dedicated ($\bar{M} = 5.97$, $\underline{SD} = 1.04$).

TABLE B-22

Mean Scores of Ten Leading Background Factors Contributing to Effective Preparation for a Naval Aviation Career ($N = 275$)

	Overall		Continuing		Separating	
	<u>M</u>	Ranking	<u>M</u>	Ranking	<u>M</u>	Ranking
Ability to focus concentration	5.93	1	5.90	1	5.96	1
Analytic abilities	5.57	2	5.50	3	5.81	2
Ability to deal with other individuals	5.54	3	5.45	4	5.80	3
Time management skills	5.52	4	5.54	2	5.52	5
Good memory	5.44	5	5.40	7	5.60	4
Leadership skills	5.39	6	5.41	6	5.12	9
General maturity	5.38	7	5.42	5	5.25	7
Accustomed to fast learning process	5.34	8	5.19	10	5.40	6
Athletic skills for development of mental discipline	5.31	9	5.23	9	5.00	10
Athletic skills for physical training	5.30	10	5.25	8	5.24	8

Factor Structure of Background Variables. Table B-23 displays the background variables that were perceived as contributing to effective preparation for a naval aviation career. Five factors accounted for 53% of the variance.

TABLE B-23

Background Factors Contributing to Career Success ($N = 275$)

		<u>Factors</u>				
	I	II	III	IV	V	
Leadership skills	.772					
Administrative abilities	.676					
General communication skills	.615					
Dealing with other individuals	.557					
Accustomed to fast learning process		.784				
Good memory		.772				
Ability to focus concentration		.769				
General physical science			.717			
Avid reading			.680			
General swimming ability			.619			
Athletic skills for development of mental discipline				.921		
Athletic skills for physical training				.911		
Study habits						.734
Time management skills						.724
Computer skills	.454					
General maturity	.430					
Eigenvalue	2.505	2.366	1.985	1.886	1.727	

Factor I was defined as MANAGERIAL SKILLS. Variables that loaded significantly on this factor were 'leadership skills,' 'administrative abilities,' 'general communication skills,' and 'dealing with other individuals.' Aviators scoring high on this factor placed high value on the ability to manage people and resources effectively. In terms of 'leadership skills,' which was the highest loading variable on this factor, the majority of high scorers on this item viewed management/administration as an opportunity to influence others while further enhancing their career. Factor II focused on LEARNING SKILLS and encompassed three variables. The factor loading highest was 'accustomed to fast learning process.' The variables 'good memory' and 'ability to focus concentration,' were also significant. While Factor III was not definable, Factor IV consisted of two items and was defined as ATHLETIC SKILLS. Factor V was defined as WORK HABITS. Variables loading significantly on this factor were 'study habits' and 'time management skills.'

Group Differences Among Background Factors Contributing to Effective Preparation. Means and standard deviations for the five background factors are given in Table B-24 for pilots and RIOs and by career intention in Table B-25. The only significant difference found across designation was the MANAGERIAL SKILLS factor ($F_{1, 274} = 3.77, p < .05$); RIOs evaluated this factor significantly higher than pilots' as contributing to effective career preparation. No significant

Means and Standard Deviations of Background Factors Contributing to Career Success by Rank and Designation ($N = 275$)

Factor	0-1			0-2			0-3			0-4			0-5					
	<u>M</u>	<u>SD</u>	<u>Pilots</u>	<u>M</u>	<u>SD</u>	<u>RIOs</u>	<u>M</u>	<u>SD</u>	<u>Pilots</u>	<u>M</u>	<u>SD</u>	<u>RIOs</u>	<u>M</u>	<u>SD</u>	<u>Pilots</u>			
Managerial skills	4.85 ^a	1.16	4.81 ^a	1.08	5.13 ^b	0.84	4.94 ^a	0.95	5.21 ^b	0.75	4.93 ^a	1.28	5.32 ^b	1.00	5.13	0.98	5.47 ^b	1.01
Learning skills	5.53	0.92	5.55	1.55	5.80	0.79	5.60	0.90	5.59	0.79	5.33	1.37	5.35	1.10	5.44	0.81	5.54	1.05
Undefined	3.82	0.90	3.94	1.52	3.89	1.16	3.82	1.01	3.81	1.15	3.16	1.10	3.80	1.28	2.72	1.04	3.17	1.43
Athletic skills	5.43	0.98	5.35	1.63	5.45	1.21	5.62	1.12	5.26	1.40	4.77	1.70	5.22	1.30	5.08	1.07	4.50	1.28
Work habits	5.07	1.19	5.68	1.16	5.20	1.44	5.39	1.11	5.34	0.92	5.08	1.24	5.38	0.87	4.50	1.67	4.75	1.22

Note: Means with different letters are significantly different ($\underline{p} < .05$) using post-hoc analyses.

differences were found between aviators who were continuing, separating, or undecided across any of the background factors.

TABLE B-25

Means and Standard Deviations of Background Factors Contributing to Career Success by Career Intention (N = 275)

Factor	Continuing		Career Intention Separating		Undecided	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Managerial skills	5.07	0.98	4.88	1.40	5.08	0.91
Learning skills	5.47	1.06	5.44	1.49	5.64	0.86
Undefined	3.63	1.22	3.38	1.11	3.83	1.11
Athletic skills	5.22	1.32	4.92	1.68	5.45	1.32
Work habits	5.27	1.11	5.06	1.49	5.32	1.11

H. **Spousal Qualities.** While the CAOs felt 'moral integrity' was the most important spouse quality contributing to success in naval aviation, the SAOs ranked it third, preceded by 'supportive of spouse' and 'common sense' (Table B-26). 'Self-reliant' was ranked fifth by the CAOs but ninth by the SAOs. An overall comparison indicated that CAOs generally evaluate spousal qualities lower than SAOs.

TABLE B-26

**Mean Score of Ten Leading Spousal Qualities Contributing
to a Naval Aviator's Success (N = 275)**

	Overall		Continuing*		Separating**	
	<u>M</u>	Ranking	<u>M</u>	Ranking	<u>M</u>	Ranking
Supportive of spouse	6.19	1	6.09	2	6.64	1
Moral integrity	6.15	2	6.14	1	6.46	3
Adaptable	6.12	3	6.08	3	6.36	5
Common sense	6.06	4	6.05	4	6.50	2
Self-reliant	5.99	5	6.01	5	6.18	9
Understanding	5.97	6	5.93	6	6.00	12
Tolerant	5.94	7	5.89	8	6.41	4
Emotionally strong	5.89	8	5.92	7	6.28	6
Patient	5.88	9	5.77	11	6.27	7
Financially responsible	5.87	10	5.88	9	5.86	13

* Ranked 10th for this group was 'supportive of military way of life' (M = 5.87).

** Ranked 8th, 10th, and 11th for this group were: 'independence' (M = 6.19), 'positive attitude' (M = 6.02), and 'unselfish' (M = 6.01), respectively.

Factor Structure of Spousal Qualities. Table B-27 lists the spousal qualities that were perceived to contribute to an aviator's success. Three factors accounted for 55% of the variance. Factor I was defined as SUPPORTIVE and consisted of seven variables that shared significant factor loadings. The highest of these loadings was 'supportive of military way of life.'

TABLE B-27

**Spousal Qualities Contributing to
an Aviator's Success ($N = 275$)**

	Factors		
	I	II	III
Supportive of military way of life	.752		
Understanding	.683		
Supportive of spouse	.637	.458	
Positive attitude	.594	.433	
Emotionally strong	.577	.419	
Unselfish	.543	.532	
Common sense	.505		
Tolerant		.837	
Adaptable		.804	
Patient		.795	
Sense of humor		.506	.501
Independent			.838
Intelligent			.738
Self-reliant	.591		.624
Financially responsible	.468		
Eigenvalue	3.841	3.563	2.415

Factor II was defined as FLEXIBILITY. Those variables loading highest on this factor included 'tolerant,' 'adaptable,' 'patience,' and 'sense of humor.' The highest loading variable was tolerant followed by adaptable. Factor III emphasized INDIVIDUALISM. Variables that loaded highly on this factor were 'independent,' 'intelligent,' and 'self-reliant.'

Group Differences in the Evaluation of the Importance of Spousal Qualities.

Means and standard deviations for the three retained factors are given for pilots and RIOs in Table B-28 and by career intention in Table B-29. Significant differences across rank were found for the factors SUPPORTIVE ($F_{4, 272} = 7.86, p < .0007$), FLEXIBILITY ($F_{4, 274} = 7.75, p < .0001$), and INDIVIDUALISM ($F_{4, 274} = 8.47, p < .0001$). No significant differences were found between pilots and RIOs. An increase in the perceived importance of all three factors with increases in rank was found. Tukey post-hoc analyses consistently revealed significantly higher perceptions of importance for all three factors among 0-4s and 0-5s compared to 0-1s and 0-2s ($df = 266, p < .05$). The MSEs were 6.23, 6.20, and 6.00 for the spousal qualities SUPPORTIVE, FLEXIBILITY, and INDIVIDUALISM, respectively.

TABLE B-28

Means and Standard Deviations for Spousal Quality Factors by Rank and Designation ($N = 275$)

Factor	0-1		0-2		0-3		0-4		0-5									
	Pilots M	SD	Pilots M	SD	Pilots M	SD	Pilots M	SD	Pilots M	SD								
Supportive	2.73 ^a	3.04	2.85 ^a	3.02	3.98 ^a	3.03	4.47	2.73	4.76	2.56	5.23 ^b	1.88	5.48 ^b	1.88	5.38 ^b	0.97	6.53 ^b	0.59
Flexibility	2.67 ^a	2.97	2.87 ^a	3.18	3.89 ^a	2.94	4.54	2.74	4.86	2.56	5.33 ^b	1.93	5.42 ^b	1.93	5.17 ^b	1.09	6.09 ^b	0.48
Individualism	2.67 ^a	2.97	2.94 ^a	3.18	3.70 ^a	2.82	4.29	2.67	4.83	2.54	5.32 ^b	1.87	5.47 ^b	1.87	5.50 ^b	1.62	6.08 ^b	0.53

Notes: Means with different letters across a factor are significantly different ($p < .05$) using post-hoc analyses.

TABLE B-29

**Means and Standard Deviations for Spousal Quality
Factors by Career Intention (N = 275)**

Factor	Career Intention					
	Continuing		Separation		Undecided	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Supportive	4.94	2.37	5.09 ^a	2.34	4.01 ^b	2.87
Flexibility	4.88	2.34	5.32 ^a	2.42	4.07 ^b	2.88
Individualism	4.85	2.32	5.17 ^a	2.37	3.95 ^b	2.84

Note: Means with different letters are significantly different ($p < .05$) using post-hoc analyses.

Analyses of variance for career intention yielded significant differences for SUPPORTIVE ($F_{2, 272} = 4.42, p < .01$), FLEXIBILITY ($F_{2, 272} = 4.04, p < .02$), and INDIVIDUALISM ($F_{2, 272} = 4.73, p < .01$) factors. Duncan post-hoc analyses indicated that SAOs evaluated the spousal qualities of SUPPORTIVE ($MSE = 6.60$), FLEXIBILITY ($MSE = 6.59$), and INDIVIDUALISM ($MSE = 6.42$) significantly higher than those with undecided career intentions ($df = 272, p < .05$). No significant differences were found between aviators continuing and separating.